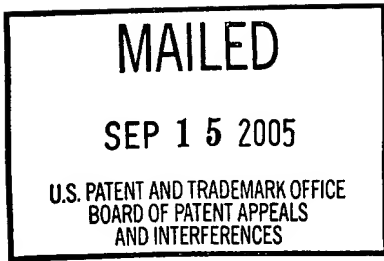


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AMIR ABOLFATHI, IKECHUKWU CHIBUZO UDECHUKU, PHILLIPS
ALEXANDER BENTON, BETH ANN COONEY and KEITH WOLF

Appeal No. 2005-1665
Application No. 09/534,461

ON BRIEF

Before FRANKFORT, MCQUADE and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-24,
which are all of the claims pending in this application.

BACKGROUND

The appellants' invention relates to an electronic commerce system and method
for communicating information including three-dimensional computer models of a

patient's teeth between one or more treating professionals and one or more patients. A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The examiner relied upon the following prior art references of record in rejecting the appealed claims:

Andreiko et al. (Andreiko)	5,683,243	Nov. 4, 1997
Joao	6,283,761	Sep. 4, 2001

The following rejections are before us for review.

Claims 1-24 stand rejected under 35 U.S.C. § 103 as being unpatentable over Joao in view of Andreiko.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (mailed March 22, 2004) for the examiner's complete reasoning in support of the rejection and to the brief (filed October 1, 2003) and reply brief (filed April 9, 2004) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. For the reasons which follow, we conclude that the evidence adduced by the examiner is sufficient to

establish that the subject matter of the appellants' claims would have been obvious to one of ordinary skill in the art at the time of the appellants' invention.

Joao discloses a healthcare system including a central processing computer system 10, which is preferably either a network or server computer (column 13, lines 35-37) for transmitting information and data between one or more patient communication devices 40, one or more healthcare provider communication devices 20, one or more intermediary communication devices 50 and one or more payer communication devices 30. Joao's central processing computer system includes a database 10H which stores, among other things, patient information such as medical or dental history and video, imaging or other healthcare data which can be utilized by healthcare providers, payers, intermediaries, patients or other users of the system, thereby facilitating the availability of such information in a network environment. Using this system, the patient's symptoms, if any, and/or examination findings are obtained from the patient and transmitted from the provider communication device 20 to the central processing computer 10, which performs a comprehensive diagnostic evaluation of the patient's symptoms and/or examination findings and generates a diagnostic report and a treatment report which will outline and/or prescribe treatment for a single diagnosis or for the list of possible diagnoses, if any. The central processing computer then transmits the reports to the provider communication device 20, at which point the medical doctor can obtain the diagnosis or possible diagnoses and corresponding treatment plans and choose a final diagnosis and/or treatment plan, if needed, to

administer to the patient. The doctor then transmits the final diagnosis and/or treatment plan to the central processing computer 10, which will then update the patient's records in the database 10H. The patient's updated records will then be available for the patient's next treatment and/or diagnosis. When the patient seeks treatment from a subsequent healthcare professional, such healthcare professional can access the patient's medical history and diagnoses and prescribed treatment plans in order to ensure that the treatment to be provided is called for in the prescribed treatment.

Joao discloses transmission of patient-related information, including images from examinations, over a network, and specifically includes any forms or types of dentists (paragraph bridging columns 12 and 13) among the "healthcare providers" contemplated as part of this network. Joao also includes among the "healthcare providers" persons who provide healthcare related services and products. Joao does not, however, specifically mention communication of three-dimensional computer models of the patient's teeth.

Andreiko discloses a system for automatically designing and manufacturing a custom orthodontic appliance from anatomical shape data. The orthodontist prepares a physical model 20 (molds or impressions) of the patient's teeth and mouth in the orthodontist's office. The physical model 20 is then imaged with a scanner 33 to produce three-dimensional images. In accordance with one embodiment of the invention, the orthodontist digitizes data from the images for input into an inputting computer 30a located in the orthodontist's office. Alternately, the inputting computer

can be located at the appliance facility, in which case the digitization is performed by an operator at the appliance facility. According to Andreiko, preferably, the digital input process utilizes interactive methods by which an operator (the orthodontist) uses a pointing device and digitizer to select particularly useful orthodontic parameters from graphics images produced by the scanner 33 on a screen 35 of a display connected to the inputting computer 30a (column 13, lines 37-42). The information 26 digitized by the orthodontist is then transmitted, by modem or in any other available manner, along with other relevant patient information gathered by the orthodontist, to the appliance design center 13. An analysis and design computer 30b, preferably located at the appliance design facility, produces an archive diskette 34 that is formatted and written with all of the relevant information of the analysis and history and prescribed treatment of the patient and then calculates, based on the digitized information 26, the final position of the patient's teeth, and the configuration of the appliance 25 required to move the patient's teeth to this final or finish position. The resulting calculated patient information is then stored in a patient data file 36. From the calculations, a computer 30c produces CNC machine readable code 42 for operating NC manufacturing equipment to produce the appliance 25.

Inasmuch as an orthodontist is a healthcare provider as described by Joao and an orthodontic appliance design center provides healthcare related products, it would have been obvious to network the orthodontist and appliance design center 13 discussed by Andreiko into Joao's healthcare e-commerce system and to transmit the

digitized tooth profile information 26 from the orthodontist's office to the central processing computer 10 for access by the appliance design center 13. It would further have been obvious to store the patient data, including the tooth profile information 26, other related patient information 16 and the calculated final tooth position information in a patient data file 36 on Joao's database 10H for subsequent access by authorized networked parties, such as subsequent providers, the patient, insurers, etc., as taught by Joao and Andreiko.

The appellants argue, with respect to claim 1, that neither Joao nor Andreiko, alone or in combination, teaches or suggests a network wherein one or more treating professionals receive and manipulate 3-D computer models of a patient's teeth, the models and other information being stored on a server coupled to the network, the server performing patient data visualization in response to a user request (brief, page 4). Initially, we, like the examiner, observe that claim 1 does not positively require one or more treating professionals to receive and manipulate the computer model of the patient's teeth. More accurately, claim 1 recites one or more treating professionals coupled to the network to receive and manipulate the computer model of the patient's teeth. In any event, the three-dimensional teeth models or profiles discussed by Andreiko are manipulable by the operator who digitizes the image data for input into the inputting computer 30a and by the appliance facility's¹ analysis and design computer

¹ The appliance facility is a provider of orthodontic appliances (a healthcare related product) and is thus a healthcare provider or "treating professional."

30b. Further, both Andreiko and Joao teach storing the patient data, including images, in a patient data file and Joao teaches providing access to such patient data upon request for subsequent treatment, for example.

With respect to claim 11, the appellants argue that neither Joao nor Andreiko teaches three-dimensional computer models of teeth that are manipulable by a treating professional, particularly manipulation of the three-dimensional model by use of a browser (brief, page 6). As discussed above, the three-dimensional tooth profile information 26 is manipulable by the operator digitizing the information for input into the inputting computer as well as by the analysis and design computer 30b. Within the field of computer science, the term “browser” is generally understood to mean “a program that accesses and displays files and other data available on the Internet and other networks” (<http://www.answers.com/topic/browser>). As disclosed by Andreiko, the digitization can be done in the orthodontist’s office, at the appliance design facility or a combination of these locations. As such, for digitization and other manipulation/calculation performed at the appliance design facility, it would have been obvious to access the information stored on the central processing computer or network 10 using a browser.

With respect to claim 21, the appellants argue that neither Joao nor Andreiko shows a data storage device coupled to the processor and adapted to store data including a manipulable three-dimensional dental model for each patient or software to communicate three-dimensional patient data in response to a client request over the

network. At the outset, it is not apparent to us why Joao's system, which includes a central processing computer, which can be a network or server computer (column 2, line 65), the central processing computer including a CPU 10A and user input devices 10B and data transmitter 10F for communication with the network, a data storage device 10H coupled to the processor and adapted to store data such as medical video, image and/or audio, data and/or information, such as x-rays, MRI data CAT scans, digital CAT scan files and/or other video, imaging and/or audio healthcare data information, is not a server meeting all of the limitations of claim' 21. Specifically, one of ordinary skill in the art would have inferred from Joao's disclosure the capability of the central processing computer 10 and database 10H of Joao to handle three-dimensional models, such as dental models and, in any event, certainly would have found it obvious, in view of the teachings of Andreiko of the use of three-dimensional dental models for obtaining healthcare products such as orthodontic appliances, to adapt the Joao e-commerce network to accommodate such three-dimensional models. Claim 21 requires no more than this.

The appellants further argue that Joao and Andreiko lack any motivation or suggestion to combine the reference teachings so as to arrive at the invention. Specifically, the appellants argue, on page 7 of the brief, that Andreiko is used only to transmit data to the appliance manufacturing facility to generate the custom appliances and does not suggest any sort of feedback between the treating physicians or patients. None of claims 1, 11 or 21 requires specific feedback between the physicians and

patients. Moreover, both the prescribing orthodontist and the operator at the appliance design facility who digitizes information 26 for input into the computer 30a from patient information 16 provided by the prescribing orthodontist are “treating professionals.”

Joao discloses a healthcare network which enables healthcare providers, including all types of dentists, to download patient data to a central processing computer for access by a central computer which analyses the data and generates a diagnosis and treatment plan, by other healthcare providers, such as providers of healthcare related products, and by insurers. In light of Joao's automated patient data analysis and treatment generating computer, one of ordinary skill in the dental field would have certainly immediately envisaged the use of Joao's network for automatically designing and manufacturing orthodontic appliances on the basis of patient data gathered by an orthodontist and would have appreciated the advantages of downloading patient data, including three-dimensional tooth profiles, to a central database for access by either the orthodontist or the professionals at the appliance design facility, either or both of whom could, in accordance with the teachings of Andreiko, be responsible for digitizing the information.

For the foregoing reasons, appellants' arguments do not persuade us that the examiner has erred in rejecting independent claims 1, 11 and 21 as being unpatentable over Joao in view of Andreiko. Accordingly, the rejection of these claims, as well as dependent claims 2-10, 12-20 and 22-24, which appellants have grouped with their

independent claims (brief, page 3), as being unpatentable over Joao in view of Andreiko is sustained.

CONCLUSION


To summarize, the decision of the examiner to reject claims 1-24 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED


CHARLES E. FRANKFORT
Administrative Patent Judge


JOHN P. MCQUADE
Administrative Patent Judge


JENNIFER D. BAHR
Administrative Patent Judge

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